Shahriar Mobashery

List of Publications by Year
in descending order

352 papers	20,754 citations	11651 70 h-index	17105 122 g-index
373 all docs	373 docs citations	373 times ranked	18642 citing authors

#	Article	IF	Citations
1	Tackling antibiotic resistance. Nature Reviews Microbiology, 2011, 9, 894-896.	28.6	919
2	Bacterial Resistance to Î²-Lactam Antibiotics:â€‰ Compelling Opportunism, Compelling Opportunity. Chemical Reviews, 2005, 105, 395-424.	47.7	795
3	Matrix metalloproteinases: structures, evolution, and diversification. FASEB Journal, 1998, 12, 1075-1095.	0.5	714
4	Versatility of Aminoglycosides and Prospects for Their Future. Clinical Microbiology Reviews, 2003, 16, 430-450.	13.6	529
5	Aminoglycosides: Perspectives on Mechanisms of Action and Resistance and Strategies to Counter Resistance. Antimicrobial Agents and Chemotherapy, 2000, 44, 3249-3256.	3.2	442
6	High-Resolution Atomic Force Microscopy Studies of theEscherichiacoliOuter Membrane:Â Structural Basis for Permeability. Langmuir, 2000, 16, 2789-2796.	3.5	415
7	A Highly Specific Inhibitor of Matrix Metalloproteinase-9 Rescues Laminin from Proteolysis and Neurons from Apoptosis in Transient Focal Cerebral Ischemia. Journal of Neuroscience, 2005, 25, 6401-6408.	3.6	397
8	Kinship and Diversification of Bacterial Penicillin-Binding Proteins and Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 1998, 42, 1-17.	3.2	392
9	Three-dimensional structure of the bacterial cell wall peptidoglycan. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4404-4409.	7.1	371
10	Kinetic Analysis of the Binding of Human Matrix Metalloproteinase-2 and -9 to Tissue Inhibitor of Metalloproteinase (TIMP)-1 and TIMP-2. Journal of Biological Chemistry, 1997, 272, 29975-29983.	3.4	251
11	Bacterial cellâ€wall recycling. Annals of the New York Academy of Sciences, 2013, 1277, 54-75.	3.8	246
12	Recent advances in MMP inhibitor design. Cancer and Metastasis Reviews, 2006, 25, 115-136.	5.9	241
13	How allosteric control of <i>Staphylococcus aureus</i> penicillin binding protein 2a enables methicillin resistance and physiological function. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16808-16813.	7.1	235
14	The Basis for Resistance to Î²-Lactam Antibiotics by Penicillin-binding Protein 2a of Methicillin-resistant Staphylococcus aureus. Journal of Biological Chemistry, 2004, 279, 40802-40806.	3.4	211
15	Potent and Selective Mechanism-Based Inhibition of Gelatinases. Journal of the American Chemical Society, 2000, 122, 6799-6800.	13.7	188
16	Discoidin Domain Receptors: Unique Receptor Tyrosine Kinases in Collagen-mediated Signaling. Journal of Biological Chemistry, 2013, 288, 7430-7437.	3.4	182
17	Penicillinâ€binding protein 2a of methicillinâ€resistant <i>Staphylococcus aureus</i>. IUBMB Life, 2014, 66, 572-577.	3.4	176
18	Substrate Hydrolysis by Matrix Metalloproteinase-9*. Journal of Biological Chemistry, 2001, 276, 20572-20578.	3.4	170

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19	Design of Novel Antibiotics that Bind to the Ribosomal Acyltransfer Site. Journal of the American Chemical Society, 2002, 124, 3229-3237.	13.7	165
20	Mechanism of anchoring of OmpA protein to the cell wall peptidoglycan of the gramâ€negative bacterial outer membrane. FASEB Journal, 2012, 26, 219-228.	0.5	164
21	Î²-Lactam resistance in Staphylococcus aureus: the adaptive resistance of a plastic genome. Cellular and Molecular Life Sciences, 2005, 62, 2617-2633.	5.4	161
22	Aminoglycosides Modified by Resistance Enzymes Display Diminished Binding to the Bacterial Ribosomal Aminoacyl-tRNA Site. Chemistry and Biology, 2002, 9, 455-463.	6.0	160
23	Cell-Wall Recycling of the Gram-Negative Bacteria and the Nexus to Antibiotic Resistance. Chemical Reviews, 2018, 118, 5952-5984.	47.7	154
24	Ab Initio QM/MM Study of Class A Î²-Lactamase Acylation:â€‰ Dual Participation of Glu166 and Lys73 in a Concerted Base Promotion of Ser70. Journal of the American Chemical Society, 2005, 127, 15397-15407.	13.7	153
25	The future of the Î²-lactams. Current Opinion in Microbiology, 2010, 13, 551-557.	5.1	149
26	Inactivation of class A .beta.-lactamases by clavulanic acid: the role of arginine-244 in a proposed nonconcerted sequence of events. Journal of the American Chemical Society, 1993, 115, 4435-4442.	13.7	141
27	Cell surface association of matrix metalloproteinase-9 (gelatinase B). Cancer and Metastasis Reviews, 2003, 22, 153-166.	5.9	141
28	Structural Basis for Clinical Longevity of Carbapenem Antibiotics in the Face of Challenge by the Common Class A Î²-Lactamases from the Antibiotic-Resistant Bacteria. Journal of the American Chemical Society, 1998, 120, 9748-9752.	13.7	138
29	Discovery of a New Class of Non-Î²-lactam Inhibitors of Penicillin-Binding Proteins with Gram-Positive Antibacterial Activity. Journal of the American Chemical Society, 2014, 136, 3664-3672.	13.7	136
30	Insights into Class D Î²-Lactamases Are Revealed by the Crystal Structure of the OXA10 Enzyme from Pseudomonas aeruginosa. Structure, 2000, 8, 1289-1298.	3.3	135
31	Characterization of the Monomeric and Dimeric Forms of Latent and Active Matrix Metalloproteinase-9. Journal of Biological Chemistry, 2000, 275, 2661-2668.	3.4	132
32	Synergistic, collaterally sensitive Î²-lactam combinations suppress resistance in MRSA. Nature Chemical Biology, 2015, 11, 855-861.	8.0	126
33	Acceleration of diabetic wound healing using a novel proteaseâ€“anti-protease combination therapy. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15226-15231.	7.1	126
34	Antimetastatic Activity of a Novel Mechanism-Based Gelatinase Inhibitor. Cancer Research, 2005, 65, 3523-3526.	0.9	121
35	Crystal Structure of 6Î±-(Hydroxymethyl)penicillanate Complexed to the TEM-1 Î²-Lactamase fromEscherichia coli:Â Evidence on the Mechanism of Action of a Novel Inhibitor Designed by a Computer-Aided Process. Journal of the American Chemical Society, 1996, 118, 7435-7440.	13.7	120
36	Lytic transglycosylases: concinnity in concision of the bacterial cell wall. Critical Reviews in Biochemistry and Molecular Biology, 2017, 52, 503-542.	5.2	120

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37	The use of triphosgene in preparation of N-carboxy .alpha.-amino acid anhydrides. Journal of Organic Chemistry, 1992, 57, 2755-2756.	3.2	118
38	Molecular Basis and Phenotype of Methicillin Resistance in <i>Staphylococcus aureus</i> and Insights into New Î²-Lactams That Meet the Challenge. Antimicrobial Agents and Chemotherapy, 2009, 53, 4051-4063.	3.2	117
39	Aminoglycoside Antibiotics. Advances in Experimental Medicine and Biology, 1998, , 27-69.	1.6	116
40	Potent Mechanism-based Inhibitors for Matrix Metalloproteinases. Journal of Biological Chemistry, 2005, 280, 33992-34002.	3.4	116
41	Discovery of Antibiotic (<i>E</i>)-3-(3-Carboxyphenyl)-2-(4-cyanostyryl)quinazolin-4(3<i>H</i>)-one. Journal of the American Chemical Society, 2015, 137, 1738-1741.	13.7	116
42	Tissue Inhibitor of Metalloproteinase (TIMP)-2 Acts Synergistically with Synthetic Matrix Metalloproteinase (MMP) Inhibitors but Not with TIMP-4 to Enhance the (Membrane Type) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 537 Td	3.4	114
43	Effect of Ablation or Inhibition of Stromal Matrix Metalloproteinase-9 on Lung Metastasis in a Breast Cancer Model Is Dependent on Genetic Background. Cancer Research, 2008, 68, 6251-6259.	0.9	114
44	Synthesis and Evaluation of 1,2,4-Triazolo[1,5-<i>a</i>]pyrimidines as Antibacterial Agents Against <i>Enterococcus faecium</i>. Journal of Medicinal Chemistry, 2015, 58, 4194-4203.	6.4	113
45	Complex Pattern of Membrane Type 1 Matrix Metalloproteinase Shedding. Journal of Biological Chemistry, 2002, 277, 26340-26350.	3.4	112
46	Co-opting the Cell Wall in Fighting Methicillin-Resistant <i>Staphylococcus aureus</i>: Potent Inhibition of PBP 2a by Two Anti-MRSA Î²-Lactam Antibiotics. Journal of the American Chemical Society, 2008, 130, 9212-9213.	13.7	111
47	Reactions of All <i>Escherichia coli</i> Lytic Transglycosylases with Bacterial Cell Wall. Journal of the American Chemical Society, 2013, 135, 3311-3314.	13.7	111
48	Structureâ€“Activity Relationship for the 4(3<i>H</i>)-Quinazolinone Antibacterials. Journal of Medicinal Chemistry, 2016, 59, 5011-5021.	6.4	111
49	Aminoglycoside-modifying enzymes: mechanisms of catalytic processes and inhibition. Drug Resistance Updates, 2001, 4, 106-117.	14.4	110
50	Short Alkylated Peptoid Mimics of Antimicrobial Lipopeptides. Antimicrobial Agents and Chemotherapy, 2011, 55, 417-420.	3.2	108
51	Dynamics of the Lipopolysaccharide Assembly on the Surface ofEscherichiacoli. Journal of the American Chemical Society, 1999, 121, 8707-8711.	13.7	106
52	Structureâ€“Activity Relationship for the Oxadiazole Class of Antibiotics. Journal of Medicinal Chemistry, 2015, 58, 1380-1389.	6.4	100
53	Structural Aspects for Evolution of Î²-Lactamases from Penicillin-Binding Proteins. Journal of the American Chemical Society, 2003, 125, 9612-9618.	13.7	96
54	Selective Inhibition of Matrix Metalloproteinase-9 Attenuates Secondary Damage Resulting from Severe Traumatic Brain Injury. PLoS ONE, 2013, 8, e76904.	2.5	95

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55	Inhibition of MMP-9 by a selective gelatinase inhibitor protects neurovasculature from embolic focal cerebral ischemia. Molecular Neurodegeneration, 2012, 7, 21.	10.8	93
56	Disruption of Allosteric Response as an Unprecedented Mechanism of Resistance to Antibiotics. Journal of the American Chemical Society, 2014, 136, 9814-9817.	13.7	93
57	Structural Basis for Carbapenemase Activity of the OXA-23 Î²-Lactamase from Acinetobacter baumannii. Chemistry and Biology, 2013, 20, 1107-1115.	6.0	92
58	Activation for Catalysis of Penicillin-Binding Protein 2a from Methicillin-ResistantStaphylococcusaureusby Bacterial Cell Wall. Journal of the American Chemical Society, 2005, 127, 2056-2057.	13.7	89
59	An Antibiotic Cloaked by Its Own Resistance Enzyme. Journal of the American Chemical Society, 1999, 121, 11922-11923.	13.7	88
60	Inhibition of human prostate cancer growth, osteolysis and angiogenesis in a bone metastasis model by a novel mechanismâ€based selective gelatinase inhibitor. International Journal of Cancer, 2006, 118, 2721-2726.	5.1	88
61	Structural insights into the bactericidal mechanism of human peptidoglycan recognition proteins. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8761-8766.	7.1	87
62	Molecular Structures and Dynamics of the Stepwise Activation Mechanism of a Matrix Metalloproteinase Zymogen:â€‰ Challenging the Cysteine Switch Dogma. Journal of the American Chemical Society, 2007, 129, 13566-13574.	13.7	87
63	Validation of Matrix Metalloproteinase-9 (MMP-9) as a Novel Target for Treatment of Diabetic Foot Ulcers in Humans and Discovery of a Potent and Selective Small-Molecule MMP-9 Inhibitor That Accelerates Healing. Journal of Medicinal Chemistry, 2018, 61, 8825-8837.	6.4	82
64	Extracellular proteases as targets for treatment of cancer metastases. Chemical Society Reviews, 2004, 33, 401.	38.1	81
65	Pharmacological Stabilization of Intracranial Aneurysms in Mice. Stroke, 2012, 43, 2450-2456.	2.0	81
66	Messenger Functions of the Bacterial Cell Wall-derived Muropeptides. Biochemistry, 2012, 51, 2974-2990.	2.5	80
67	The Complex of a Designer Antibiotic with a Model Aminoacyl Site of the 30S Ribosomal Subunit Revealed by X-ray Crystallography. Journal of the American Chemical Society, 2003, 125, 3410-3411.	13.7	77
68	Design, Synthesis, and Characterization of Potent, Slow-binding Inhibitors That Are Selective for Gelatinases. Journal of Biological Chemistry, 2002, 277, 11201-11207.	3.4	76
69	A Chemical Biological Strategy to Facilitate Diabetic Wound Healing. ACS Chemical Biology, 2014, 9, 105-110.	3.4	75
70	Loss of individual electrostatic interactions between aminoglycoside antibiotics and resistance enzymes as an effective means to overcoming bacterial drug resistance. Journal of the American Chemical Society, 1995, 117, 11060-11069.	13.7	74
71	Resistance to Î²-Lactam Antibiotics and Its Mediation by the Sensor Domain of the Transmembrane BlaR Signaling Pathway in Staphylococcus aureus. Journal of Biological Chemistry, 2003, 278, 18419-18425.	3.4	74
72	High-Resolution X-ray Structure of an Acyl-Enzyme Species for the Class D OXA-10 Î²-Lactamase. Journal of the American Chemical Society, 2002, 124, 2461-2465.	13.7	73

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73	A Convenient Triphosgene-Mediated Synthesis of Symmetric Carboxylic Acid Anhydrides. Journal of Organic Chemistry, 1994, 59, 2913-2914.	3.2	72
74	Recognition of peptidoglycan and Î²-lactam antibiotics by the extracellular domain of the Ser/Thr protein kinase StkP from<i>Streptococcus pneumoniae</i>. FEBS Letters, 2011, 585, 357-363.	2.8	72
75	How Î²-Lactamases Have Driven Pharmaceutical Drug Discovery. Advances in Experimental Medicine and Biology, 1998, , 71-98.	1.6	72
76	The sentinel role of peptidoglycan recycling in the Î²-lactam resistance of the Gram-negative Enterobacteriaceae and Pseudomonas aeruginosa. Bioorganic Chemistry, 2014, 56, 41-48.	4.1	70
77	Selection and Characterization of Î²-Lactamâ€“Î²-Lactamase Inactivator-Resistant Mutants following PCR Mutagenesis of the TEM-1 Î²-Lactamase Gene. Antimicrobial Agents and Chemotherapy, 1998, 42, 1542-1548.	3.2	69
78	Shedding of Discoidin Domain Receptor 1 by Membrane-type Matrix Metalloproteinases. Journal of Biological Chemistry, 2013, 288, 12114-12129.	3.4	69
79	X-ray Absorption Studies of Human Matrix Metalloproteinase-2 (MMP-2) Bound to a Highly Selective Mechanism-based Inhibitor. Journal of Biological Chemistry, 2001, 276, 17125-17131.	3.4	68
80	Quest for Selectivity in Inhibition of Matrix Metalloproteinases. Current Topics in Medicinal Chemistry, 2004, 4, 1227-1238.	2.1	67
81	Prostate Cancer-Associated Membrane Type 1-Matrix Metalloproteinase. American Journal of Pathology, 2007, 170, 2100-2111.	3.8	66
82	Conformational Dynamics in Penicillin-Binding Protein 2a of Methicillin-Resistant <i>Staphylococcus aureus</i>, Allosteric Communication Network and Enablement of Catalysis. Journal of the American Chemical Society, 2017, 139, 2102-2110.	13.7	65
83	Molecular Bases for Interactions between Î²-Lactam Antibiotics and Î²-Lactamases. Accounts of Chemical Research, 1997, 30, 162-168.	15.6	64
84	Roles of Matrix Metalloproteinases in Flow-Induced Outward Vascular Remodeling. Journal of Cerebral Blood Flow and Metabolism, 2009, 29, 1547-1558.	4.3	64
85	Three Decades of the Class A β-Lactamase Acyl-Enzyme. Current Protein and Peptide Science, 2009, 10, 401-407.	1.4	64
86	Nuances of Mechanisms and Their Implications for Evolution of the Versatile Î²-Lactamase Activity:â€‰ From Biosynthetic Enzymes to Drug Resistance Factors. Journal of the American Chemical Society, 1997, 119, 7619-7625.	13.7	63
87	The Importance of a Critical Protonation State and the Fate of the Catalytic Steps in Class A Î²-Lactamases and Penicillin-binding Proteins. Journal of Biological Chemistry, 2004, 279, 34665-34673.	3.4	63
88	Mechanism-Based Inactivation of Bacterial Aminoglycoside 3'-Phosphotransferases. Journal of the American Chemical Society, 1995, 117, 80-84.	13.7	62
89	Matrix Metalloproteinase 2 Inhibition: Combined Quantum Mechanics and Molecular Mechanics Studies of the Inhibition Mechanism of (4-Phenoxyphenylsulfonyl)methylthiirane and Its Oxirane Analogue. Biochemistry, 2009, 48, 9839-9847.	2.5	62
90	Effects on Substrate Profile by Mutational Substitutions at Positions 164 and 179 of the Class A TEMpUC19 Î²-Lactamase from Escherichia coli. Journal of Biological Chemistry, 1999, 274, 23052-23060.	3.4	61

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91	Elucidation of the Molecular Recognition of Bacterial Cell Wall by Modular Pneumococcal Phage Endolysin CPL-1. Journal of Biological Chemistry, 2007, 282, 24990-24999.	3.4	61
92	Mechanistic Basis for the Emergence of Catalytic Competence against Carbapenem Antibiotics by the GES Family of Î²-Lactamases. Journal of Biological Chemistry, 2009, 284, 29509-29513.	3.4	61
93	Total Synthesis of <i>N</i>-Acetylglucosamine-1,6-anhydro-<i>N</i>-acetylmuramylpentapeptide and Evaluation of Its Turnover by AmpD from Escherichia coli. Journal of the American Chemical Society, 2009, 131, 5187-5193.	13.7	61
94	Crystal Structures of Penicillin-Binding Protein 6 from <i>Escherichia coli</i>. Journal of the American Chemical Society, 2009, 131, 14345-14354.	13.7	60
95	Synthesis of Chiral 2-(4-Phenoxyphenylsulfonylmethyl)thiiranes as Selective Gelatinase Inhibitors. Organic Letters, 2005, 7, 4463-4465.	4.6	59
96	Effect of synthetic matrix metalloproteinase inhibitors on lipopolysaccharide-induced bloodâ€“brain barrier opening in rodents: Differences in response based on strains and solvents. Brain Research, 2007, 1133, 186-192.	2.2	59
97	Insertion of Epicatechin Gallate into the Cytoplasmic Membrane of Methicillin-resistant Staphylococcus aureus Disrupts Penicillin-binding Protein (PBP) 2a-mediated Î²-Lactam Resistance by Delocalizing PBP2. Journal of Biological Chemistry, 2010, 285, 24055-24065.	3.4	59
98	Mechanism of turnover of imipenem by the TEM .beta.-lactamase revisited. Journal of the American Chemical Society, 1995, 117, 7600-7605.	13.7	58
99	Insights into pneumococcal fratricide from the crystal structures of the modular killing factor LytC. Nature Structural and Molecular Biology, 2010, 17, 576-581.	8.2	57
100	An Antibiotic-Resistance Enzyme from a Deep-Sea Bacterium. Journal of the American Chemical Society, 2010, 132, 816-823.	13.7	57
101	Synthetic Peptidoglycan Substrates for Penicillin-Binding Protein 5 of Gram-Negative Bacteria. Journal of Organic Chemistry, 2004, 69, 778-784.	3.2	56
102	Crystal structure of CbpF, a bifunctional cholineâ€binding protein and autolysis regulator from <i>Streptococcus pneumoniae</i>. EMBO Reports, 2009, 10, 246-251.	4.5	56
103	Î²-Lactam Resistance Mechanisms: Gram-Positive Bacteria and<i>Mycobacterium tuberculosis</i>. Cold Spring Harbor Perspectives in Medicine, 2016, 6, a025221.	6.2	56
104	Molecular Dynamics at the Root of Expansion of Function in the M69L Inhibitor-Resistant TEM Î²-Lactamase fromEscherichiacoli. Journal of the American Chemical Society, 2002, 124, 9422-9430.	13.7	54
105	Synthetic Peptidoglycan Motifs for Germination of Bacterial Spores. ChemBioChem, 2010, 11, 2525-2529.	2.6	54
106	A Mechanism-Based Inhibitor Targeting thedd-Transpeptidase Activity of Bacterial Penicillin-Binding Proteins. Journal of the American Chemical Society, 2003, 125, 16322-16326.	13.7	52
107	Synthesis of a Fragment of Bacterial Cell Wall. Journal of Organic Chemistry, 2004, 69, 2137-2146.	3.2	52
108	Discrete steps in sensing of beta-lactam antibiotics by the BlaR1 protein of the methicillin-resistant Staphylococcus aureus bacterium. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10630-10635.	7.1	52

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109	Bacterial AmpD at the Crossroads of Peptidoglycan Recycling and Manifestation of Antibiotic Resistance. Journal of the American Chemical Society, 2009, 131, 8742-8743.	13.7	52
110	Activation of BlaR1 Protein of Methicillin-resistant Staphylococcus aureus, Its Proteolytic Processing, and Recovery from Induction of Resistance. Journal of Biological Chemistry, 2011, 286, 38148-38158.	3.4	52
111	Î²-Lactams against the Fortress of the Gram-Positive <i>Staphylococcus aureus</i> Bacterium. Chemical Reviews, 2021, 121, 3412-3463.	47.7	52
112	Design, Synthesis, and Evaluation of a Potent Mechanism-Based Inhibitor for the TEM .beta.-Lactamase with Implications for the Enzyme Mechanism. Journal of the American Chemical Society, 1995, 117, 11055-11059.	13.7	51
113	Purification, characterization, and investigation of the mechanism of aminoglycoside 3'-phosphotransferase type Ia. Biochemistry, 1995, 34, 12681-12688.	2.5	51
114	The First Structural and Mechanistic Insights for Class D Î²-Lactamases:Â Evidence for a Novel Catalytic Process for Turnover of Î²-Lactam Antibiotics. Journal of the American Chemical Society, 2000, 122, 6132-6133.	13.7	51
115	X-ray Crystal Structure of the Acylated Î²-Lactam Sensor Domain of BlaR1 fromStaphylococcus aureusand the Mechanism of Receptor Activation for Signal Transduction. Journal of the American Chemical Society, 2004, 126, 13945-13947.	13.7	51
116	Structural Basis for Progression toward the Carbapenemase Activity in the GES Family of Î²-Lactamases. Journal of the American Chemical Society, 2012, 134, 19512-19515.	13.7	51
117	Characterization of the Bifunctional Aminoglycoside-Modifying Enzyme ANT(3â€˜â€‰â€˜)-Ii/AAC(6â€˜)-IId from Serratia marcescens. Biochemistry, 2006, 45, 8368-8377.	2.5	50
118	Reactions of the Three AmpD Enzymes of <i>Pseudomonas aeruginosa</i>. Journal of the American Chemical Society, 2013, 135, 4950-4953.	13.7	50
119	From Genome to Proteome to Elucidation of Reactions for All Eleven Known Lytic Transglycosylases from <i>Pseudomonas aeruginosa</i>. Angewandte Chemie - International Edition, 2017, 56, 2735-2739.	13.8	50
120	Crystal Structures of Bacterial Peptidoglycan Amidase AmpD and an Unprecedented Activation Mechanism. Journal of Biological Chemistry, 2011, 286, 31714-31722.	3.4	49
121	Catalytic Mechanism of Penicillin-Binding Protein 5 of <i>Escherichia coli</i>. Biochemistry, 2007, 46, 10113-10121.	2.5	48
122	Structural and Functional Insights into Peptidoglycan Access for the Lytic Amidase LytA of Streptococcus pneumoniae. MBio, 2014, 5, e01120-13.	4.1	48
123	Three-dimensional QSAR analysis and design of new 1,2,4-oxadiazole antibacterials. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 1011-1015.	2.2	48
124	Inhibition of the NMC-A Î²-Lactamase by a Penicillanic Acid Derivative and the Structural Bases for the Increase in Substrate Profile of This Antibiotic Resistance Enzyme. Journal of the American Chemical Society, 1998, 120, 9382-9383.	13.7	47
125	Cleavage at the stem region releases an active ectodomain of the membrane typeÂ1 matrix metalloproteinase. Biochemical Journal, 2005, 387, 497-506.	3.7	47
126	Dissection of Events in the Resistance to Î²-Lactam Antibiotics Mediated by the Protein BlaR1 fromStaphylococcus aureus. Biochemistry, 2012, 51, 4642-4649.	2.5	47

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127	A Light-Inactivated Antibiotic. Journal of Medicinal Chemistry, 2000, 43, 128-132.	6.4	46
128	Active Site Ringâ€Opening of a Thiirane Moiety and Picomolar Inhibition of Gelatinases. Chemical Biology and Drug Design, 2009, 74, 527-534.	3.2	46
129	Class C Î²-Lactamases Operate at the Diffusion Limit for Turnover of Their Preferred Cephalosporin Substrates. Antimicrobial Agents and Chemotherapy, 1999, 43, 1743-1746.	3.2	45
130	A Novel Î²-Lactamase Activity from a Penicillin-binding Protein of Treponema pallidum and Why Syphilis Is Still Treatable with Penicillin. Journal of Biological Chemistry, 2004, 279, 14917-14921.	3.4	45
131	Facile chloride substitution of activated alcohols by triphosgene: application to cephalosporin chemistry. Journal of Organic Chemistry, 1991, 56, 7186-7188.	3.2	44
132	Facilitation of the .DELTA.2 .fwdarw. .DELTA.1 pyrroline tautomerization of carbapenem antibiotics by the highly conserved arginine-244 of class A .beta.-lactamases during the course of turnover. Journal of the American Chemical Society, 1992, 114, 1505-1506.	13.7	44
133	Structural Basis for Potent Slow Binding Inhibition of Human Matrix Metalloproteinase-2 (MMP-2). Journal of Biological Chemistry, 2003, 278, 27009-27015.	3.4	44
134	Design, Synthesis, and Evaluation of a Mechanism-Based Inhibitor for Gelatinase A. Journal of Organic Chemistry, 2005, 70, 5709-5712.	3.2	44
135	Selective Water-Soluble Gelatinase Inhibitor Prodrugs. Journal of Medicinal Chemistry, 2011, 54, 6676-6690.	6.4	44
136	Conscripting .beta.-lactamase for use in drug delivery. Synthesis and biological activity of a cephalosporin C10-ester of an antibiotic dipeptide. Journal of the American Chemical Society, 1986, 108, 1685-1686.	13.7	43
137	Muropeptides in <i>Pseudomonas aeruginosa</i> and their Role as Elicitors of Î²â€Lactamâ€Antibiotic Resistance. Angewandte Chemie - International Edition, 2016, 55, 6882-6886.	13.8	43
138	Penem BRL 42715: An Effective Inactivator for .beta.-Lactamases. Journal of the American Chemical Society, 1995, 117, 4797-4801.	13.7	42
139	Mechanistic Characterization of the Bifunctional Aminoglycoside-Modifying Enzyme AAC(3)-Ib/AAC(6â€˜)-Ibâ€˜ from Pseudomonas aeruginosa. Biochemistry, 2007, 46, 5270-5282.	2.5	42
140	Muropeptide Binding and the X-ray Structure of the Effector Domain of the Transcriptional Regulator AmpR of <i>Pseudomonas aeruginosa</i>. Journal of the American Chemical Society, 2017, 139, 1448-1451.	13.7	42
141	Mutational Replacement of Leu-293 in the Class C Enterobacter cloacae P99 Î²-Lactamase Confers Increased MIC of Cefepime. Antimicrobial Agents and Chemotherapy, 2002, 46, 1966-1970.	3.2	41
142	Lysine carboxylation in proteins: OXA-10 Î²-lactamase. Proteins: Structure, Function and Bioinformatics, 2005, 61, 246-257.	2.6	41
143	Lytic Transglycosylase MltB of <i>Escherichia coli</i> and Its Role in Recycling of Peptidoglycan Strands of Bacterial Cell Wall. Journal of the American Chemical Society, 2008, 130, 11878-11879.	13.7	41
144	Restoration of Susceptibility of Methicillin-resistant Staphylococcus aureus to Î²-Lactam Antibiotics by Acidic pH. Journal of Biological Chemistry, 2008, 283, 12769-12776.	3.4	41

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145	Cell-Wall Remodeling by the Zinc-Protease AmpDh3 from Pseudomonas aeruginosa. Journal of the American Chemical Society, 2013, 135, 12604-12607.	13.7	41
146	Structure and Cell Wall Cleavage by Modular Lytic Transglycosylase MltC of <i>Escherichia coli</i>. ACS Chemical Biology, 2014, 9, 2058-2066.	3.4	41
147	Constructing and deconstructing the bacterial cell wall. Protein Science, 2020, 29, 629-646.	7.6	41
148	Properties of a Bifunctional Bacterial Antibiotic Resistance Enzyme That Catalyzes ATP-Dependent 2â€˜â€˜-Phosphorylation and Acetyl-CoA-Dependent 6â€˜-Acetylation of Aminoglycosides. Journal of the American Chemical Society, 1997, 119, 2317-2318.	13.7	40
149	Metabolism of a Highly Selective Gelatinase Inhibitor Generates Active Metabolite. Chemical Biology and Drug Design, 2007, 70, 371-382.	3.2	40
150	The bifunctional enzymes of antibiotic resistance. Current Opinion in Microbiology, 2009, 12, 505-511.	5.1	40
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